

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A process for scheduling recording, storing, and deleting of television and/or Web page program material on a storage medium in a computer environment, comprising:

generating a prioritized list of program viewing preferences;

wherein said list contains a viewer's explicit preferred program selections for recording and inferred preferred program selections for recording;

comparing said list with a database of program guide objects;

wherein said program guide objects indicate when programs of interest are broadcast;

generating a schedule of time versus available storage space that is optimal for the viewer's explicit or inferred preferred programs using said database of program guide objects, said schedule of time versus available storage space tracks all stored programs and programs that have been scheduled to be recorded in the future;

wherein said explicit and inferred preferred programs include television broadcast programs and/or Universal Resource Locators (URLs);

generating an ordered list of future showings of a specific program of interest using said database of program guide objects; and

checking showing(s) of said specific program of interest in said ordered list for input source or storage space conflicts with programs previously scheduled for recording using said schedule of time versus available storage space until a particular showing of said specific program of interest is found having no input and/or space conflicts for the time the particular

showing is available such that a recording of said specific program of interest is made as soon as possible and scheduling said particular showing of said specific program of interest for recording;

wherein said checking step makes a determination of conflicts for an explicitly selected program immediately upon the viewer making the explicit selection of the program to record[.];

;

upon the checking step failing to find a particular showing of said specific program of interest having no input and/or space conflicts for the time the particular showing is available, sorting said ordered list of future showings; and

wherein the ordering of said ordered list of future showings results in the viewer being presented with any conflicting explicit preferred program selections in order from least impact on programs previously scheduled for recording to greatest.

2. (Previously Presented) The process of claim 1, wherein the viewer requests that certain programs be captured, which results in the highest possible priority for those programs.
3. (Previously Presented) The process of claim 1, wherein the viewer explicitly expresses preferences using appurtenances provided through a viewer interface.
4. (Previously Presented) The process of claim 1, wherein said preferences are inferred from viewing patterns.
5. (Original) The process of claim 1, wherein said preferences correspond to television viewing objects stored in a replicated database.
6. (Previously Presented) The process of claim 1, further comprising:
creating an input schedule; and

wherein said input schedule tracks free and occupied time slots for each input source.

7. (Previously Presented) The process of claim 6, wherein a total amount of space available at any given moment in time is found by generating a sum of all occupied space or space that will be occupied at that particular time, and subtracting the sum from total capacity available to store programs.
8. (Previously Presented) The process of claim 1, wherein inferred programs previously scheduled for recording automatically lose conflict decisions with explicit program selections.
9. (Original) The process of claim 1, wherein a program is recorded if at all times between when the recording would be initiated and when it expires, sufficient space is available to hold it.
10. (Original) The process of claim 6, wherein there must be an input available from which to record for the duration of the program.
11. (Previously Presented) The process of claim 6, wherein only those types of inputs from which the desired program can be recorded are considered during scheduling.
- 12-15. (Canceled)
16. (Currently Amended) The process of claim [[15]] 1, wherein for each candidate showing in said list, the viewer is presented with an option of shortening expiration dates for conflicting explicit preferred program selections.
17. (Currently Amended) The process of claim [[15]] 1, wherein the viewer is presented with the option to cancel each previously scheduled recording that has an input conflict with the desired program.
18. (Previously Presented) The process of claim 1, further comprising:
scheduling, by a background scheduler, each preferred program in turn until the list of preferred programs is exhausted or no further opportunity to record is available.

19. (Canceled)
20. (Original) The process of claim 18, wherein a preferred program is scheduled if and only if there are no conflicts with other scheduled programs.
21. (Previously Presented) The process of claim 1, wherein an inferred preferred program which has been scheduled is deleted if it conflicts with an explicit selection or if a change in viewer preferences identifies a higher priority program that could be recorded at that time.
22. (Original) The process of claim 1, wherein all conflicts are resolved as early as possible.
23. (Canceled)
24. (Previously Presented) The process of claim 1, wherein when there are schedule conflicts with other programs that the viewer has explicitly selected, the viewer is asked which scheduled recordings should be canceled and which should be completed.
25. (Previously Presented) The process of claim 4, wherein schedule conflicts between explicit program selections and inferred program selections are resolved in favor of said explicit selections without asking the viewer.
26. (Previously Presented) The process of claim 1, wherein an expiration time of at least one conflicting stored inferred preferred program is shortened to exactly that needed to allow recording of said particular showing of said specific program of interest when said specific program of interest is an explicit preferred program.
27. (Previously Presented) The process of claim 1, wherein schedule conflicts resulting from the recording of aggregate objects are resolved using preference weighting of the programs involved.

28. (Previously Presented) The process of claim 1, wherein when multiple conflicts are caused by a particular program in an aggregate object, it will only be recorded when its preference exceeds that of all conflicting programs.

29. (Currently Amended) An apparatus for scheduling recording, storing, and deleting of television and/or Web page program material on a storage medium in a computer environment, comprising:

a module ~~for that~~ generat[[ing]]es a prioritized list of program viewing preferences;

wherein said list contains a viewer's explicit preferred program selections for recording and derived preferred program selections for recording;

a module ~~for that~~ compar[[ing]]s said list with a database of program guide objects;

wherein said program guide objects indicate when programs of interest are broadcast;

a module ~~for that~~ generat[[ing]]es a schedule of time versus available storage space that is optimal for the viewer's explicit or inferred preferred programs using said database of program guide objects, said schedule of time versus available storage space tracks all stored programs and programs that have been scheduled to be recorded in the future;

wherein said explicit and inferred preferred programs include television broadcast programs and/or Universal Resource Locators (URLs);

a module ~~for that~~ generat[[ing]]es an ordered list of future showings of a specific program of interest using said database of program guide objects; and

a module ~~for that~~ check[[ing]]s showing(s) of said specific program of interest in said ordered list for input source or storage space conflicts with programs previously scheduled for recording using said schedule of time versus available storage space-until a particular showing of said specific program of interest is found having no input and/or space conflicts for the time the

particular showing is available such that a recording of said specific program of interest is made as soon as possible and scheduling said particular showing of said specific program of interest for recording;

wherein said ~~checking~~ module that checks showings makes a determination of conflicts for an explicitly selected program immediately upon the viewer making the explicit selection of the program to record[[]];

a module that sorts said ordered list of future showings upon failure of said module that checks showings to find a particular showing of said specific program of interest having no input and/or space conflicts for the time the particular showing is available; and

wherein the ordering of said ordered list of future showings results in the viewer being presented with any conflicting explicit preferred program selections in order from least impact on programs previously scheduled for recording to greatest.

30. (Previously Presented) The apparatus of claim 29, wherein the viewer requests that certain programs be captured, which results in the highest possible priority for those programs.

31. (Previously Presented) The apparatus of claim 29, wherein the viewer explicitly expresses preferences using appurtenances provided through a viewer interface.

32. (Previously Presented) The apparatus of claim 29, wherein said preferences are inferred from viewing patterns.

33. (Original) The apparatus of claim 29, wherein said preferences correspond to television viewing objects stored in a replicated database.

34. (Previously Presented) The apparatus of claim 29, further comprising:

an input schedule; and

wherein said input schedule tracks the free and occupied time slots for each input source.

35. (Previously Presented) The apparatus of claim 34, wherein a total amount of space available at any given moment in time is found by generating a sum of all occupied space or space that will be occupied at that particular time, and subtracting the sum from total capacity available to store programs.

36. (Previously Presented) The apparatus of claim 29, wherein inferred programs previously scheduled for recording automatically lose conflict decisions with explicit program selections.

37. (Original) The apparatus of claim 29, wherein a program is recorded if at all times between when the recording would be initiated and when it expires, sufficient space is available to hold it.

38. (Original) The apparatus of claim 34, wherein there must be an input available from which to record for the duration of the program.

39. (Previously Presented) The apparatus of claim 34, wherein only those types of inputs from which the desired program can be recorded are considered during scheduling.

40-43. (Canceled)

44. (Currently Amended) The apparatus of claim [[43]] 29, wherein for each candidate showing in said list, the viewer is presented with an option of shortening expiration dates for conflicting explicit preferred program selections.

45. (Currently Amended) The apparatus of claim [[43]] 29, wherein the viewer is presented with the option to cancel each previously scheduled recording that has an input conflict with the desired program.

46. (Previously Presented) The apparatus of claim 29, further comprising:

a background scheduler that schedules each preferred program in turn until the list of preferred programs is exhausted or no further opportunity to record is available.

47. (Canceled)
48. (Original) The apparatus of claim 46, wherein a preferred program is scheduled if and only if there are no conflicts with other scheduled programs.
49. (Previously Presented) The apparatus of claim 29, wherein an inferred preferred program which has been scheduled is deleted if it conflicts with an explicit selection or if a change in viewer preferences identifies a higher priority program that could be recorded at that time.
50. (Original) The apparatus of claim 29, wherein all conflicts are resolved as early as possible.
51. (Canceled)
52. (Previously Presented) The apparatus of claim 29, wherein when there are schedule conflicts with other programs that the viewer has explicitly selected, the viewer is asked which scheduled recordings should be canceled and which should be completed.
53. (Previously Presented) The apparatus of claim 32, wherein schedule conflicts between explicit program selections and inferred program selections are resolved in favor of said explicit selections without asking the viewer.
54. (Previously Presented) The apparatus of claim 29, wherein an expiration time of at least one conflicting stored inferred preferred program is shortened to exactly that needed to allow recording of said particular showing of said specific program of interest when said specific program of interest is an explicit preferred program.
55. (Previously Presented) The apparatus of claim 29, wherein schedule conflicts resulting from the recording of aggregate objects are resolved using preference weighting of the programs involved.

56. (Previously Presented) The apparatus of claim 29, wherein when multiple conflicts are caused by a particular program in an aggregate object, it will only be recorded when its preference exceeds that of all conflicting programs.

57. (Currently Amended) A program storage medium readable by a computer, tangibly embodying a program of instructions executable by the computer to perform method steps for scheduling recording, storing, and deleting of television and/or Web page program material on a storage medium in a computer environment, comprising the steps of:

generating a prioritized list of program viewing preferences;

wherein said list contains a viewer's explicit preferred program selections for recording and derived preferred program selections for recording;

comparing said list with a database of program guide objects;

wherein said program guide objects indicate when programs of interest are broadcast;

generating a schedule of time versus available storage space that is optimal for the viewer's explicit or inferred preferred programs using said database of program guide objects, said schedule of time versus available storage space tracks all stored programs and programs that have been scheduled to be recorded in the future;

wherein said explicit and inferred preferred programs include television broadcast programs and/or Universal Resource Locators (URLs);

generating an ordered list of future showings of a specific program of interest using said database of program guide objects; ~~and~~

checking showing(s) of said specific program of interest in said ordered list for input source or storage space conflicts with programs previously scheduled for recording using said schedule of time versus available storage space until a particular showing of said specific

program of interest is found having no input and/or space conflicts for the time the particular showing is available such that a recording of said specific program of interest is made as soon as possible and scheduling said particular showing of said specific program of interest for recording;

wherein said checking step makes a determination of conflicts for an explicitly selected program immediately upon the viewer making the explicit selection of the program to record[.]]

;

upon the checking step failing to find a particular showing of said specific program of interest having no input and/or space conflicts for the time the particular showing is available, sorting said ordered list of future showings; and

wherein the ordering of said ordered list of future showings results in the viewer being presented with any conflicting explicit preferred program selections in order from least impact on programs previously scheduled for recording to greatest.

58. (Previously Presented) The method of claim 57, wherein the viewer requests that certain programs be captured, which results in the highest possible priority for those programs.

59. (Previously Presented) The method of claim 57, wherein the viewer explicitly expresses preferences using appurtenances provided through a viewer interface.

60. (Previously) The method of claim 57, wherein said preferences are inferred from viewing patterns.

61. (Original) The method of claim 57, wherein said preferences correspond to television viewing objects stored in a replicated database.

62. (Previously Presented) The method of claim 57, further comprising the steps of:

creating an input schedule; and

wherein said input schedule tracks the free and occupied time slots for each input source.

63. (Previously Presented) The method of claim 62, wherein a total amount of space available at any given moment in time is found by generating a sum of all occupied space or space that will be occupied at that particular time, and subtracting the sum from the total capacity available to store programs.

64. (Previously Presented) The method of claim 57, wherein inferred programs previously scheduled for recording automatically lose conflict decisions with explicit program selections.

65. (Original) The method of claim 57, wherein a program is recorded if at all times between when the recording would be initiated and when it expires, sufficient space is available to hold it.

66. (Original) The method of claim 62, wherein there must be an input available from which to record for the duration of the program.

67. (Previously Presented) The method of claim 62, wherein only those types of inputs from which the desired program can be recorded are considered during scheduling.

68-71. (Canceled)

72. (Currently Amended) The method of claim [[71]] 57, wherein for each candidate showing in said list, the viewer is presented with an option of shortening expiration dates for conflicting explicit preferred program selections.

73. (Currently Amended) The method of claim [[71]] 57, wherein the viewer is presented with the option to cancel each previously scheduled recording that has an input conflict with the desired program.

74. (Previously Presented) The method of claim 57, further comprising the step of:

scheduling, by a background scheduler, each preferred program in turn until the list of preferred programs is exhausted or no further opportunity to record is available.

75. (Canceled)
76. (Original) The method of claim 74, wherein a preferred program is scheduled if and only if there are no conflicts with other scheduled programs.
77. (Previously Presented) The method of claim 57, wherein an inferred preferred program which has been scheduled is deleted if it conflicts with an explicit selection or if a change in viewer preferences identifies a higher priority program that could be recorded at that time.
78. (Original) The method of claim 57, wherein all conflicts are resolved as early as possible.
79. (Canceled)
80. (Previously Presented) The method of claim 57, wherein when there are schedule conflicts with other programs that the viewer has explicitly selected, the viewer is asked which scheduled recordings should be canceled and which should be completed.
81. (Previously Presented) The method of claim 60, wherein schedule conflicts between explicit program selections and inferred program selections are resolved in favor of said explicit selections without asking the viewer.
82. (Previously Presented) The method of claim 57, wherein an expiration time of at least one conflicting stored inferred preferred program is shortened to exactly that needed to allow recording of said particular showing of said specific program of interest when said specific program of interest is an explicit preferred program.
83. (Previously Presented) The method of claim 57, wherein schedule conflicts resulting from the recording of aggregate objects are resolved using preference weighting of the programs involved.

84. (Previously Presented) The method of claim 57, wherein when multiple conflicts are caused by a particular program in an aggregate object, it will only be recorded when its preference exceeds that of all conflicting programs.

85. (Currently Amended) A process for scheduling recording, storing, and deleting of television and/or Web page program material on a storage medium, comprising:

deriving an ordered list of future showings of a specific program of interest from a database of program guide objects;

wherein said program guide objects indicate when programs are broadcast or transmitted;

determining storage medium memory space and input source scheduling conflicts between showing(s) of said specific program of interest in said ordered list and programs that have been scheduled to be recorded in the future, the determining step checking a plurality of input sources for input sources appropriate for each showing of said specific program of interest in said ordered list;

wherein said programs that have been scheduled to be recorded in the future comprise a viewer's explicit program selections and inferred program selections; ~~and~~

scheduling for recording a particular showing of said specific program of interest that is found having no memory space and/or input conflicts such that a recording of said specific program of interest is made as soon as possible[.]] ; and

upon a failing to find a particular showing of said specific program of interest having no memory space and/or input conflicts, sorting said list of future showings, the ordering of said list of future showings results in the viewer being presented with any conflicting showings of said specific program of interest in order from least impact on programs previously scheduled for recording to greatest.

86. (Previously Presented) The process of claim 85, wherein the viewer explicitly requests that certain programs be captured, which results in the highest possible priority for those programs.
87. (Previously Presented) The process of claim 85, wherein said inferred program selections are inferred from the viewer's viewing patterns.
88. (Previously Presented) The process of claim 85, wherein said inferred program selections are inferred from the viewer's indicated preferences.
89. (Previously Presented) The process of claim 85, wherein inferred programs already scheduled for recording automatically lose conflict decisions with explicit program selections.
90. (Previously Presented) The process of claim 85, wherein a program is recorded when at all times between when the recording would be initiated and when it expires, sufficient storage medium space is available to hold it.
91. (Previously Presented) The process of claim 85, wherein there must be an input available from which to record for the duration of the program.
92. (Previously Presented) The process of claim 85, wherein only those inputs from which a desired program can be recorded are considered during scheduling.
93. (Previously Presented) The process of claim 85, wherein said specific program of interest is an inferred program selection.
94. (Previously Presented) The process of claim 85, wherein said specific program of interest is an explicit program selection.

95. (Previously Presented) The process of claim 94, wherein the viewer is presented with an option to cancel each previously scheduled recording that has an input conflict with the viewer's explicit program selection.

96. (Previously Presented) The process of claim 94, wherein the viewer is presented with an option to shorten each previously recorded program's expiration date that has a storage medium memory space conflict with the viewer's explicit program selection.

97. (Previously Presented) The process of claim 96, wherein the viewer's explicit program selection is scheduled to be recorded if the viewer shortens each of the previously recorded program's expiration dates that have a storage medium memory space conflict with the viewer's explicit program selection.

98. (Previously Presented) The process of claim 94, wherein if any previously scheduled programs conflict with an explicit program selection, then the viewer is asked which previously scheduled program should be canceled and which should be completed.

99. (Currently Amended) An apparatus for scheduling recording, storing, and deleting of television and/or Web page program material on a storage medium, comprising:

one or more storage medium;

two or more input sources;

a module ~~for that~~ derive[(ing)]s an ordered list of future showings of a specific program of interest from a database of program guide objects;

wherein said program guide objects indicate when programs are broadcast or transmitted;

a module ~~for that~~ determin[(ing)]es storage medium memory space and input source scheduling conflicts between showings of said specific program of interest in said ordered list and programs that have been scheduled to be recorded in the future, the ~~determining~~ module that

determines storage medium space and input source scheduling conflicts check[[ing]]s a plurality of input sources for input sources appropriate for each showing of said specific program of interest in said ordered list;

wherein said programs that have been scheduled to be recorded in the future comprise a viewer's explicit program selections and inferred program selections; and

a module ~~for~~ that schedule[[ing]]es for recording a particular showing of said specific program of interest that is found having no memory space and/or input conflicts such that a recording of said specific program of interest is made as soon as possible[.]] ; and

a module that, upon a failing to find a particular showing of said specific program of interest having no memory space and/or input conflicts, sorts said list of future showings, the ordering of said list of future showings results in the viewer being presented with any conflicting showings of said specific program of interest in order from least impact on programs previously scheduled for recording to greatest.

100. (Previously Presented) The apparatus of claim 99, wherein the viewer explicitly requests that certain programs be captured, which results in the highest possible priority for those programs.

101. (Previously Presented) The apparatus of claim 99, wherein said inferred program selections are inferred from the viewer's viewing patterns.

102. (Previously Presented) The apparatus of claim 99, wherein said inferred program selections are inferred from the viewer's indicated preferences.

103. (Previously Presented) The apparatus of claim 99, wherein inferred programs already scheduled for recording automatically lose conflict decisions with explicit program selections.

104. (Previously Presented) The apparatus of claim 99, wherein a program is recorded when at all times between when the recording would be initiated and when it expires, sufficient storage medium space is available to hold it.

105. (Previously Presented) The apparatus of claim 99, wherein there must be an input available from which to record for the duration of the program.

106. (Previously Presented) The apparatus of claim 99, wherein only those inputs from which a desired program can be recorded are considered during scheduling.

107. (Previously Presented) The apparatus of claim 99, wherein said specific program of interest is an inferred program selection.

108. (Previously Presented) The apparatus of claim 99, wherein said specific program of interest is an explicit program selection.

109. (Previously Presented) The apparatus of claim 108, wherein the viewer is presented with an option to cancel each previously scheduled recording that has an input conflict with one of the viewer's explicit program selections.

110. (Previously Presented) The apparatus of claim 108, wherein the viewer is presented with an option to shorten each previously recorded program's expiration date that has a storage medium memory space conflict with one of the viewer's explicit program selections.

111. (Previously Presented) The apparatus of claim 110, wherein the viewer's explicit program selection is scheduled to be recorded if the viewer shortens each of the previously recorded program's expiration dates that have a storage medium memory space conflict with the viewer's explicit program selection.

112. (Previously Presented) The apparatus of claim 108, wherein if any previously scheduled programs conflict with an explicit program selection, then the viewer is asked which previously scheduled program should be canceled and which should be completed.

113. (Currently Amended) A program storage medium readable by a computer, tangibly embodying a program of instructions executable by the computer to perform method steps for scheduling recording, storing, and deleting of television and/or Web page program material on a storage medium, comprising:

deriving an ordered list of future showings of a specific program of interest from a database of program guide objects;

wherein said program guide objects indicate when programs are broadcast or transmitted;

determining storage medium memory space and input source scheduling conflicts between showings of said specific program of interest in said ordered list and programs that have been scheduled to be recorded in the future, the determining step checking a plurality of input sources for input sources appropriate for each showing of said specific program of interest in said ordered list;

wherein said programs that have been scheduled to be recorded in the future comprise a viewer's explicit program selections and inferred program selections; and

scheduling for recording a particular showing of said specific program of interest that is found having no memory space and/or input conflicts such that a recording of said specific program of interest is made as soon as possible[.]] ; and

upon a failing to find a particular showing of said specific program of interest having no memory space and/or input conflicts, sorting said list of future showings, the ordering of said list of future showings results in the viewer being presented with any conflicting showings of said

specific program of interest in order from least impact on programs previously scheduled for recording to greatest.

114. (Previously Presented) The method of claim 113, wherein the viewer explicitly requests that certain programs be captured, which results in the highest possible priority for those programs.

115. (Previously Presented) The method of claim 113, wherein said inferred program selections are inferred from the viewer's viewing patterns.

116. (Previously Presented) The method of claim 113, wherein said inferred program selections are inferred from the viewer's indicated preferences.

117. (Previously Presented) The method of claim 113, wherein inferred programs already scheduled for recording automatically lose conflict decisions with explicit program selections.

118. (Previously Presented) The method of claim 113, wherein a program is recorded when at all times between when the recording would be initiated and when it expires, sufficient storage medium space is available to hold it.

119. (Previously Presented) The method of claim 113, wherein there must be an input available from which to record for the duration of the program.

120. (Previously Presented) The method of claim 113, wherein only those inputs from which a desired program can be recorded are considered during scheduling.

121. (Previously Presented) The method of claim 113, wherein said specific program of interest is an inferred program selection.

122. (Previously Presented) The method of claim 113, wherein said specific program of interest is an explicit program selection.

123. (Previously Presented) The method of claim 122, wherein the viewer is presented with an option to cancel each previously scheduled recording that has an input conflict with one of the viewer's explicit program selections.

124. (Previously Presented) The method of claim 122, wherein the viewer is presented with an option to shorten each previously recorded program's expiration date that has a storage medium memory space conflict with one of the viewer's explicit program selections.

125. (Previously Presented) The method of claim 124, wherein the viewer's explicit program selection is scheduled to be recorded if the viewer shortens each of the previously recorded program's expiration dates that have a storage medium memory space conflict with the viewer's explicit program selection.

126. (Previously Presented) The method of claim 122, wherein if any previously scheduled programs conflict with an explicit program selection, then the viewer is asked which previously scheduled program should be canceled and which should be completed.